

REMARKS

Claims 1, 4 – 10 and 12 – 15 are presented for reconsideration and further examination in view of the foregoing amendments and the following remarks.

In the outstanding Office action, the Examiner rejected claims 1, 4, 5, 7 and 14 under 35 U.S.C. §103(a) as being obvious over U.S. patent no. 6,466,694 to Kamada et al. (hereinafter referred to as “the Kamada et al. ‘694 patent”) in view of European reference no. EP 0 587 450 to Kazuyuki et al. (hereinafter referred to as “the Kazuyuki ‘450 et al. reference”); rejected claim 6 under 35 U.S.C. §103(a) as being obvious over the Kamada et al. ‘694 patent in view of the Kazuyuki et al. ‘450 reference in further view of U.S. patent no. 5,717,794 to Koga et al. (hereinafter referred to as “the Koga et al. ‘794 patent”); rejected claim 8 as being unpatentable over the Kamada et al. ‘694 patent in view of the Kazuyuki et al. ‘450 reference in view of U.S. patent no. 6,466,694 to Tabata et al. (hereinafter referred to as “the Tabata et al. ‘296 patent”); and rejected claims 9, 10, 12, 13 and 15 as being unpatentable over the Kamada et al. ‘694 patent and the Kazuyuki et al. ‘450 patent in view of U.S. patent no. 6,043,823 to Kodaira et al. (hereinafter referred to as “the Kodaira et al. ‘823 patent”).

By this Response and Amendment:

claims 1 and 9 have been amended to recite a first judgment means for judging whether an attribute of a “rectangle region is one of a character, ruled line, *and others...*” and to recite “an attribute of the rectangle region, *whose attribute has been judged by the first judgment means as ‘others’* is one of a ‘table’ a ‘photograph,’ and a ‘frame;’” and as amended, the §103(a) rejections thereto and the claims dependent thereon have been traversed.

Support for the amendments to claims 1 and 9 is found on page 9, line 35 through page 10, line 10 and on page 14 lines 21 through 31 of the originally filed specification. Therefore, it is

respectfully submitted that the above amendments do not introduce any new matter to this application within the meaning of 35 U.S.C. §132.

Rejections Under 35 U.S.C. 103(a)

1. Claims 1, 4, 5, 7 and 14

The Examiner rejected claims 1,4, 5, 6, and 14 as being unpatentable over the Kamada et al. '694 patent in view of the Kazuyuki et al. '450 reference

Response

Applicants traverse the rejection to claim 1 as amended.

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) that some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

The feature of the present invention is that “the region extracting means extracts the rectangle regions as the target regions to be modified, and the region extraction means comprise a first judgment means for judging whether the attribute of the rectangle region is one of a “character,” “ruled-line,” and “others,” projection means for taking a projection data in vertical and horizontal directions of the rectangle region of the image data, and a second judgment means for judging whether the attribute of the rectangle region, whose attribute has been judged by the first judgment means as “others,” is one of a “table,” a “photograph,” and a “frame” according to the number of peaks detected from the projection data.”

The key point of the present invention is that “a second judgment means for judging whether

the attribute of the rectangle region, whose attribute has been judged by the first judgment means as “others,” is one of a “table,” a “photograph,” and a “frame” according to the number of peaks detected from the projection data.

In contrast that, the key point of the present invention is not disclosed in Kazuyuki et al. Namely, Kazuyuki et al. only disclose “in the case where the portions corresponding to the table frame line exist at the left and right edges of both of the partial histograms in the horizontal and vertical directions (namely, in the case where frame lines of the table exist at the left and right edges and the top and bottom edges of the rectangle), the corresponding rectangle is determined to be a table area (S905, S906, S908 in Fig. 20).” In brief, in Kazuyuki et al., the partial histograms in the horizontal and vertical directions of the rectangle region being determined to be a table area temporarily are obtained and when the number of peaks is over three, the corresponding rectangle is determined to be a table area. Namely, in Kazuyuki et al., a judgment means for judging whether the attribute of the rectangle region is one of a “table,” a “photograph,” and a “frame” according to the number of peaks detected from the projection data is not disclosed.

The Examiner cites the Kazuyuki et al. ‘450 reference to show rectangle regions being extracted in an image processing method. However, nowhere in the Kazuyuki et al. ‘450 reference is there disclosed modifying a rectangle image in accordance with attribute information thereof. At most, the Kazuyuki et al. ‘450 reference teaches a document processor wherein an image is divided into rectangle data and is classified into character area and an area of a figure or a photograph, table, etc. In fact, the Kazuyuki et al. ‘450 reference does not show modification of rectangle data at all; the Kazuyuki et al. ‘450 reference divides an input image into rectangle regions to hasten processing time and to improve operating efficiency, nothing more.

Therefore, neither the primary Kamada et al. ‘694 patent nor the Kazuyuki ‘450 reference

teaches or suggests all of the limitations of claim 1 as amended. Therefore, claim 1 is asserted to be patentable over the cited references. Similarly, as dependent claims contain all of the limitations of the independent claim from which they depend, claims 4, 5, 7 and 14 are patentable over the cited references for at least the same reasons as amended claim 1. Accordingly, Applicants request reconsideration and withdrawal of the rejections thereto.

2. Claim 6

The Examiner rejected claim 6 as being unpatentable over the Kamada et al. '694 reference in view of the Kazuyuki et al. '450 reference in further view of the Koga et al. '794 patent.

Response

Applicants respectfully traverse the Examiner's rejection. The arguments with respect to claim 1 are herein incorporated by reference.

The Examiner cites the Koga et al. '794 patent against the "at-a-glance menu" limitation of claim 6. However, notwithstanding the reasons for the Examiner's citation, the Koga et al. '794 patent does not account for the deficiencies of Kamada et al. '694 patent and the Kazuyuki et al. '450 reference – the Koga et al. '794 patent does not teach or suggest a rectangle region, whose attribute has been judged by the first judgment means as "others," and is one of a "table," a "photograph," and a "frame" according to the number of peaks detected from the projection data. As such, all of the limitations of claim 6 are neither taught nor suggested by the cited prior art. Accordingly, Applicants request reconsideration and withdrawal of the rejections thereto.

3. Claim 8

The Examiner rejected claim 8 as being unpatentable over the Kamada et al. '694 patent in view of the Kazuyuki et al. '450 reference in view of the Tabata et al. '296 patent.

Response

Applicants respectfully traverse the Examiner's rejection. The arguments with respect to claim 1 are herein incorporated by reference.

The Examiner cites the Tabata et al. '296 patent against the "resolution conversion means" limitation of claim 8. However, notwithstanding the reasons for the Examiner's citation, the Tabata et al. '296 patent does not account for the deficiencies of Kamada et al ' 694 patent and the Kazuyuki et al '450 reference – the Tabata et al. '296 patent does not teach or suggest a rectangle region whose attribute has been judged by the first judgment means as "others," and is one of a "table," a "photograph," and a "frame" according to the number of peaks detected from the projection data. As such, all of the limitations of claim 8 are neither taught nor suggested by the cited prior art. Accordingly, Applicants request reconsideration and withdrawal of the rejections thereto.

4. Claims 9, 10, 12, 13 and 15

The Examiner rejected claims 9, 10, 12, 13 and 15 as being unpatentable over the Kamada et al. '694 patent and the Kazuyuki et al. '450 patent in view of the Kodaira et al. '823 patent.

Response

Applicants traverse the rejection to claim 9 as amended.

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) that some suggestion or motivation to modify the references exists; (2) a reasonable expectation of

success; and (3) that the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

The feature of the present invention is that “the region extracting means extracts the rectangle regions as the target regions to be modified, and the region extraction means comprise a first judgment means for judging whether the attribute of the rectangle region is one of a “character,” “ruled-line,” and “others,” projection means for taking a projection data in vertical and horizontal directions of the rectangle region of the image data, and a second judgment means for judging whether the attribute of the rectangle region, whose attribute has been judged by the first judgment means as “others,” is one of a “table,” a “photograph,” and a “frame” according to the number of peaks detected from the projection data.”

The key point of the present invention is that “a second judgment means for judging whether the attribute of the rectangle region, whose attribute has been judged by the first judgment means as “others,” is one of a “table,” a “photograph,” and a “frame” according to the number of peaks detected from the projection data.

In contrast that, the key point of the present invention is not disclosed in Kazuyuki et al. Namely, Kazuyuki et al. only disclose “in the case where the portions corresponding to the table frame line exist at the left and right edges of both of the partial histograms in the horizontal and vertical directions (namely, in the case where frame lines of the table exist at the left and right edges and the top and bottom edges of the rectangle), the corresponding rectangle is determined to be a table area (S905, S906, S908 in Fig. 20).” In brief, in Kazuyuki et al., the partial histograms in the horizontal and vertical directions of the rectangle region being determined to be a table area temporarily are obtained and when the number of peaks is over three, the corresponding rectangle is

determined to be a table area. Namely, in Kazuyuki et al., a judgment means for judging whether the attribute of the rectangle region is one of a “table” a “photograph,” and a “frame” according to the number of peaks detected from the projection data is not disclosed.

The Examiner cites the Kazuyuki et al. ‘450 reference to show rectangle regions being extracted in an image processing method and further cites the Kodaira et al. ‘823 patent to show a document processing system that can automatically select and modify regions of a document. However, nowhere in the Kazuyuki et al. ‘450 patent nor in the Kodaira et al. ‘823 reference is there disclosed a modification of a rectangle image in accordance with attribute information thereof. At most, the Kazuyuki et al. ‘450 reference teaches a document processor wherein an image is divided into rectangle data and is classified into character area and an area of a figure or a photograph, table, etc. In fact, the Kazuyuki et al. ‘450 reference does not show modification of rectangle data at all; the Kazuyuki et al. ‘450 reference divides an input image into rectangle regions to hasten processing time and to improve operating efficiency. The Kodaira et al. ‘823 reference discloses selectively editing “noise” out of a document, but does not teach editing a document in accordance with attributes of a rectangle region.

Therefore, neither the primary Kamada et al. ‘694 patent, the Kazuyuki et al. ‘450 reference, nor the Kodaira et al. ‘823 patent teaches or suggests all of the limitations of claim 1 as amended. Therefore, claim 9 is asserted to be patentable over the cited references. Similarly, as dependent claims contain all of the limitations of the independent claim from which they depend, claims 10 – 13 and 15 are patentable over the cited references for at least the same reasons as amended claim 1. Accordingly, Applicants request reconsideration and withdrawal of the rejections thereto.

CONCLUSION


In light of the foregoing, Applicants submit that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

Respectfully submitted,

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Date: July 19, 2004
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